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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,441	04/01/2004	Peter Heimlicher	P/1336-188	7777

2352 7590 03/22/2007  
OSTROLENK FABER GERB & SOFFEN  
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NEW YORK, NY 100368403

EXAMINER
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PHAN, HANH

ART UNIT	PAPER NUMBER
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2613

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/815,441

Applicant(s)

HEIMLICH, PETER

Examiner

Hanh Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

**-In the abstract section, the abstract should be limited to a single paragraph. And, the form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. For example, in the abstract, "optical filter means", "electric filter means" and "processing means" should be avoided. Correction is required.**

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 8, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bourquin et al (US Patent No. 6,469,489 cited by applicant) in view of Isoda (US Patent No. 3,928,760).

Regarding claim 1, referring to Figure 2, Bourquin et al teaches a low noise light receiver (i.e., low noise light receiver 1, Fig. 2), comprising:

a light sensor (i.e., light sensor PS, Fig. 2) for generating a sensor signal, the sensor signal comprising a wanted signal resulting from a light source and an interfering signal resulting from interfering light (i.e., col. 3, lines 52-67 and col. 4, lines 1-31);

an electric filter (i.e., a voltage controlled current source CS and a low pass filter FB, Fig. 2) connected to the light sensor (i.e., light sensor PS, Fig. 2) for filtering out the interfering signal and for generating a correction signal that substantially compensates the interfering signal (i.e., col. 4, lines 1-31); and

a processor (i.e., processor AMP, Fig. 2) connected to the light sensor (i.e., light sensor PS, Fig. 2) and the electric filter (i.e., low pass filter FB, Fig. 2) for processing the wanted signal in order to generate an output signal (i.e., col. 4, lines 1-31).

Bourquin et al differs from claim 1 in that he fails to teach an optical filter for reducing the interfering light. Isoda, from the same field of endeavor, likewise teaches a

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low noise optical receiver (Fig. 3). Isoda further teaches an optical filter (i.e., optical filter 14, Fig. 3) for reducing the interfering light (i.e., col. 3, lines 54-67 and col. 4, lines 1-14). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the optical filter for reducing the interfering light as taught by Isoda in the system of Bourquin et al. One of ordinary skill in the art would have been motivated to do this since allowing selecting the wanted signal and eliminating the unwanted signals and to improve the signal to noise ratio.

Regarding claim 2, the combination of Bourquin et al and Isoda teaches the optical filter (i.e., optical filter 14, Fig. 3 of Isoda) comprises an optical band pass filter (i.e., Fig. 3 of Isoda, col. 4, lines 2-14).

Regarding claim 3, the combination of Bourquin et al and Isoda teaches the optical band pass filter (i.e., optical filter 14, Fig. 3 of Isoda) is a dielectric filter (i.e., Fig. 3 of Isoda, col. 4, lines 2-14).

Regarding claim 4, the combination of Bourquin et al and Isoda teaches the optical filter comprises at least one optical cutoff filter (i.e., Figs. 3, 4A and 4B of Isoda, col. 3, lines 65-67 and col. 4, lines 1-14).

Regarding claim 5, the combination of Bourquin et al and Isoda teaches the slope of the optical cutoff filter is at the short-wave end of the transmission range of the optical band pass (i.e., Figs. 3, 4A and 4B of Isoda, col. 3, lines 65-67 and col. 4, lines 1-14).

Regarding claim 6, the combination of Bourquin et al and Isoda teaches the optical cutoff filter is a color filter (i.e., Figs. 3, 4A and 4B of Isoda, col. 3, lines 65-67 and col. 4, lines 1-14).

Regarding claim 8, Bourquin et al further teaches the electric filter comprises a current sink and a low pass filter (i.e., the electric filter comprises a voltage controlled current source CS and a low pass filter FB, Fig. 2, col. 4, lines 1-31).

Regarding claim 9, Bourquin et al further teaches the current sink (i.e., voltage controlled current source CS, Fig. 2) is adjustable for essentially compensating the interfering signal (i.e., col. 4, lines 1-31).

Regarding claim 11, Bourquin et al further teaches the electric filter is connected in parallel to the processor (i.e., the electric filter comprises a voltage controlled current source CS and a low pass filter FB is connected in parallel to the amplifier circuit AMP, Fig. 2, col. 2, lines 52-67 and col. 4, lines 1-31).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bourquin et al (US Patent No. 6,469,489 cited by applicant) in view of Isoda (US Patent No. 3,928,760) and further in view of Kuhara et al (US Patent No. 5,787,215).

Regarding claim 7, the combination of Bourquin et al and Isoda differs from claim 7 in that it fails to specifically teach the light sensor is a wavelength selective photodiode. However, Kubara et al in US Patent No. 5,787,215 teaches an optical receiver (Figure 11). Kubara et al further teaches the light sensor is a wavelength selective photodiode (i.e., Fig. 11, col. 22, lines 30-47). Based on this teaching, it would

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have been obvious to one having skill in the art at the time the invention was made to incorporate the light sensor is a wavelength selective photodiode as taught by Kubara et al in the system of the combination of Bourquin et al and Isoda. One of ordinary skill in the art would have been motivated to do this since allowing increasing the sensitivity of the photodiode and to improve the signal to noise ratio and reducing the error signal.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bourquin et al (US Patent No. 6,469,489 cited by applicant) in view of Isoda (US Patent No. 3,928,760) and further in view of Jackson (US Patent No. 5,714,909 cited by applicant).

Regarding claim 10, the combination of Bourquin et al and Isoda differs from claim 10 in that it fails to specifically teach the processor comprises an amplifier and a feedback resistor with a high resistance. However, Jackson in US Patent No. 5,714,909 teaches an optical receiver (Figures 1-4). Jackson further teaches the processor comprises an amplifier and a feedback resistor with a high resistance (i.e., Figs. 1-4, from col. 3, line 1 to col. 9, line 9). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the processor comprises an amplifier and a feedback resistor with a high resistance as taught by Jackson in the system of the combination of Bourquin et al and Isoda. One of ordinary skill in the art would have been motivated to do this since allowing increasing the power level of the signal to a desired level.

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7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bourquin et al (US Patent No. 6,469,489 cited by applicant) in view of Isoda (US Patent No. 3,928,760) and further in view of Murata et al (US Patent No. 5,243,182).

Regarding claim 12, the combination of Bourquin et al and Isoda differs from claim 12 in that it fails to specifically teach a photoelectric proximity switch including a light receiver. However, Murata et al in US Patent No. 5,243,182 teaches a photoelectric proximity switch including a light receiver (i.e., Fig. 1, col. 15, lines 45-67 and col. 16, lines 1-55 and see abstract section). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the photoelectric proximity switch including a light receiver as taught by Murata et al in the system of the combination of Bourquin et al and Isoda. One of ordinary skill in the art would have been motivated to do this since allowing detecting the presence or absence of an object by using a light.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Eastmond et al (US Patent No. 5,923,454) discloses optical receiver.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

  
**HANH PHAN**  
**PRIMARY EXAMINER**